UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8, MONTANA OFFICE
FEDERAL BUILDING, 10 W. 15th STREET, SUITE 3200
HELENA, MONTANA 59626

STATEMENT OF BASIS

PERMITEE:	City of Ronan Flathead Reservation
FACILITY:	Ronan Wastewater Treatment Facility
PERMIT NUMBER:	MT0021474
RESPONSIBLE OFFICAL:	Kim Aipperspach, Mayor City of Ronan 207 Main St. SW, Suite A Ronan, MT 59864
CONTACT:	Jim Morgan, Wastewater Operator 207 Main Street SW, Suite A Ronan, MT 59864
PERMIT TYPE:	Minor POTW, Indian Country, Renewal
RECEIVING WATER:	Tributary of Crow Creek
LOCATION:	205 Mink Lane, Ronan, MT SW ¼ of Section 2, Township 20 N, Range 20 W 47° 31'14" N/114°6'59" W
POPULATION:	1,900

A. Facility Description

The Ronan Wastewater Treatment Facility (WWTF) consists of a lagoon system with three lined cells and two constructed wetland cells. The facility serves the Town of Ronan, which has a population of approximately 1,900 people. There are no industrial contributors to Ronan's wastewater system. Influent enters the lagoon system at the north end and is piped to cell 1. The flow pattern is from cell 1 to cell 2 to cell 3 and then into the wetland cells. Cells 1 and 2 are aerated by blowers. The aeration control building is located at the south end of cell 1. An unused discharge pipe, which was not listed in the previous permit, is located near the southwest corner of cell 1. Valves controlling flow from cells 1 through 3 can be adjusted to bypass the wetland cells and discharge through this pipe. The effluent from the wetlands cells discharge to a joint pipe, which leads to the permitted discharge point. Effluent flow is measured at the discharge from each wetland cell at a flow measurement weir. The two flow measurements are added together to get the total discharge flow. Discharge samples are collected at the permitted discharge point which is directly west of the wetland cell 4. Only the discharge point directly west of wetland cell 4 will be permitted for discharge.

EPA issued an Administrative Order (AO) to the City in 2004 to install disinfection equipment that would allow the permittee to meet the permit's fecal coliform limits. During the summer of 2007, the permittee installed and began to operate UV disinfection.

B. Receiving Water

The WWTF discharges to an intermittent tributary of Crow Creek at approximately 47° 31' 12" N and 114° 6' 58" W. From the point of discharge, the intermittent tributary flows two miles to Crow Creek. A small spring up gradient of the WWTF's discharge point is the apparent source of the intermittent tributary.

C. Past Discharge Data

The discharge data below covers the period from 2002-2007:

	Flow, 30 Day Ave. MGD	**BOD_5, 30 Day Ave. mg/L**	**TSS, 30 Day Ave. mg/L**	**Fecal Coliform, 30 Day Ave., #/100 ml**	**Ammonia Nitrogen, mg/L**
Range	0.0602-0.3128	2-22	Non-Detect (ND) - 29	ND-14,700	ND-23.4
Average	0.1527	7	4.7	1385	8.8
Permit Limit	--------	30	45	200	-------
Number of Exceedences	--------	0	0	18	--------

D. Water Quality Standards

1. Water Quality Classification

The CSKT has approved water quality standards (WQS) which have recently been revised during a triennial review.

The Ronan WWTF discharges to an intermittent tributary of Crow Creek. According to the Tribal WQS, Flathead River and its tributaries downstream from the highway bridge at Polson are classified as B-1, with exceptions, which include the main stem of Crow Creek from the road crossing in Section 16, Township 20 North, Range 20 West, downstream to the Flathead River. As this un-named tributary does not fall within the exceptions, it is classified as B-1. Waters classified B-1 must be maintained suitable for drinking and culinary and food processing purposes after conventional treatment; bathing, swimming and recreation; wildlife (birds, mammals, amphibians and reptiles);

the growth and propagation of salmonid fishes and associated aquatic life; and agricultural and industrial water supply purposes.

2. Mixing Zone

The revised Tribal WQS contain a Mixing Zone Implementation Procedure which prohibits a mixing zone or dilution allowance where the receiving water is intermittent and dilution flows are not available during critical flow conditions. Since the receiving water for the Ronan WWTF is intermittent, discharge limits will be based on achieving the applicable WQS at the discharge point.

4. Ammonia

The Tribal aquatic life standards for ammonia are dependent upon the pH and the temperature of the receiving water body. To determine the applicable WQS, pH and temperature data from the nearest surface water station, Crow Creek above the reservoir, monitored by the Tribe, was used.

Date	Temperature °C	pH
10/2003	7.4	8.6
11/2003	4.5	7.3
2/2004	3.1	8.1
3/2004	6.2	8.2
5/2004	13.7	8.8
6/2004	14.8	8.7
7/2004	19.5	8.6
8/2004	20.1	8.3
9/2004	11.5	8.1
10/2004	7.6	8.1
11/2004	3.1	8.3
1/2005	0.7	7.9
3/2005	5.4	8.2
4/2005	6.3	8.3
5/2005	13.0	8.5
6/2005	17.7	7.9
7/2005	18.5	8.3
8/2005	18.2	8.4
9/2005	13.5	8.7

Using the above data, the following table shows the applicable WQS:

Condition	Period a/	Salmonids Present	Early Life Stages Present	Ambient Condition		Water Quality Standard (mg/L)
				pH	Temperature ° C	
Acute	Winter	Yes	NA	8.3 b/	NA	3.15
Acute	Summer	Yes	NA	8.7 b/	NA	1.47
Chronic	Winter	NA	Yes	8.2 c/	5.2 c/	1.79
Chronic	Summer	NA	Yes	8.6 c/	18.2 c/	0.735

NA- Not Applicable
a/ Winter is defined as November 1 through March 31 and summer as April 1 through October 31.
b/ Based on 95th percentile of data of the seasonal data.
c/ Based on 75th percentile of data the seasonal data.

The WWTF has monitored ammonia in its discharge for the last 5 years. Ammonia values ranged from non-detection to 23.4 mg/L and averaged 8.8 mg/L. The acute and chronic WQSs were exceeded in the discharge 49 times. An acute and chronic limit for ammonia will be necessary in this permit renewal.

5. *E. coli*

The revised Tribal Water Quality Standards (WQS) have replaced the fecal coliform standard with an *E. coli* standard. The geometric mean of *E. coli* may not exceed 126 colony forming units (cfu)/100 mL if resulting from domestic sewage and 10% may not exceed 252 cfu/100 ml. A 30 day average effluent limit of 126 cfu/100 mL and a 7 day limit of 252 cfu/100 ml have been added to the permit. The fecal coliform limits have been removed from the permit.

E. Effluent Limitations

The effluent limitations become effective on the effective date of the permit except for nitrogen ammonia, which becomes effective four years after the effective date of the permit. The effluent limitations and the basis for the limitations are given in the table below:

Effluent Characteristic	30-Day Average	7-Day Average	Daily Maximum	Basis a/
BOD_5, mg/L b/	30	45	N/A	Previous Permit 40 CFR 133.102(a)(1)&(2)
Percent BOD_5 Removal	85	N/A	N/A	40 CFR 133.102(a)(3)
Total Suspended Solids (TSS), mg/L c/	30	45	N/A	Previous Permit 40 CFR 133.102(b)(1)&(2)
Percent TSS Removal	85	N/A	N/A	40 CFR 133.102(b)(3)
E. coli, cfu/100 mL d/	126	252	N/A	WQS
Ammonia Nitrogen, mg/L **Winter e/** **Summer e/**	 1.79 0.74	 N/A	 3.15 1.47	 WQS
The pH of the discharge shall not be less than 6.5 or greater than 9.0 at any time. **f/**				WQS
There shall be no discharge of floating solids or visible foam in other than trace amounts, nor shall there be a discharge which causes a visible sheen in the receiving waters. The concentration of oil and grease in any single sample shall not exceed 10 mg/L.				Previous Permit

a/ The basis of the effluent limitations is given below:

"Previous Permit" refers to limitations in the previous permit. The NPDES regulations (40 CFR Part 122.44(1)(1) Reissued permits) require that when a permit is renewed or reissued, interim limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit unless the circumstances on which the previous permit was issued have materially and substantially changed since the previous permit was issued and would constitute cause for permit modification or revocation and reissuance under 40 CFR Part 122.62.
"WQS" refers to effluent limitations based on tribal water quality standards. See the section on Water Quality Considerations for information on how the effluent limitations were determined.

b/ The limits for biochemical oxygen demand (BOD_5) are based on 40 CFR 133.102(a), "Secondary Treatment Standards," are the same as in the previous permit.

c/ The limits for total suspended solids (TSS) are based on 40 CFR 133.102(b), "Secondary Treatment Standards," and are the same as in the previous permit.

d/ The limit for *E. coli* applies year round.

e/ Winter is defined as November 1 through March 31 and summer as April 1 through October 31.

f/ The limits for pH are based on tribal water quality standards. The standards for B-1 water bodies state that variation of hydrogen ion concentration within the range of 6.5 s.u. to 9.0 s.u. must be less than 0.5 s.u.

F. Self-Monitoring Requirements

All effluent is sampled at the discharge west of cell 4.

Effluent Characteristic	Frequency	Sample Type a/
Flow, MGD	Weekly	Instantaneous
Effluent BOD_5, mg/L	Monthly	Grab
Influent BOD_5, mg/L	Monthly	Grab
TSS, mg/L	Monthly	Grab
Influent TSS, mg/L	Monthly	Grab
***E. coli*, # cfu/100 ml b/**	Monthly	Grab
Ammonia Nitrogen, mg/L	Weekly	Grab
pH, standard units	Monthly	Instantaneous or Grab
Oil and Grease, Visual c/	Monthly	Visual

a/ See Definitions, Part 1.1 of the permit for definition of terms.

b/ Monitoring for *E.coli* applies year-round.

c/ In the event that an oil sheen or floating oil is observed in the discharge, a grab sample shall immediately be taken, analyzed, and reported.

G. Compliance Schedule

The final permit limits for total ammonia nitrogen shall become effective four (4) years from the effective date of the permit, providing additional time for the design and implementation of changes to the system. During this period the permittee shall comply with the following schedule including the submission of interim written progress reports and a final compliance report sent to EPA not later than 14 days following each date specified below. The progress reports shall include a description of the work to be performed to meet the milestone, any problems encountered, and actions taken to address the problems.

Date	Milestone	Reporting Requirement
12 months from effective date of the permit	Selection of an alternative for complying with limits and preliminary design	Interim progress Report
24 months from effective date of the permit	Obtain funding	Interim Progress Report
36 months from effective date of the permit	Final Engineering and Design Plan, begin construction	Interim Progress Report
48 months from effective date of the permit	Compliance with ammonia limits	Final Compliance Report

H. Biosolids

The use and/or disposal of sewage sludge shall be done under the authorization of an NPDES permit issued for the use and/or disposal of sewage sludge by the EPA Region 8 biosolids program. Information on the biosolids general permit can be found on the EPA Region 8 website at: http://www.epa.gov/region8/water/biosolids/ .

I. Whole Effluent Toxicity Monitoring

40 CFR 122.21(j)(5) specifies which publicly-owned treatment works must conduct whole effluent toxicity (WET) testing. WET testing is required for facilities with (1) a design flow greater than 1 mgd; (2) an approved pretreatment program. The Director may require other facilities to conduct WET testing based on the following considerations: (1) variability of pollutants; (2) ratio of effluent flow to receiving stream flow; (3) existing controls on point and non point sources; (4) receiving stream characteristics. EPA's analysis indicates that the facility is not required to conduct testing at this time.

J. Total Maximum Daily Load

On June 21, 2000 and September 21, 2000, U.S. District Judge Donald W. Molloy issued orders stating that until all necessary total maximum daily loads (TMDLs) under Section 303(d) of the Clean Water Act are established for a particular water quality limited segment, the EPA is prohibited from issuing new permits or from increasing already permitted discharges under the NPDES program. (The orders were issued pursuant to the lawsuit Friends of the Wild Swan, et al., v. U.S. EPA, CV 97-35-DWM, District of Montana, Missoula Division.)

Although the Confederated Salish and Kootenai Tribes have adopted water quality standards that have been approved by EPA, they have not listed water bodies as impaired and developed a 303(d) list to require TMDLs. When EPA approved the State of Montana's 1996 list of impaired streams and lakes which included water bodies within tribal reservation boundaries, EPA specifically stated that the approval did not extend to waters in Indian Country. EPA finds that the issuance of this permit would not conflict with the Order because the permit limits are the same or lower than those in the previous permit, and the permit contains a condition that would allow the permit to be reopened to

include any Waste Load Allocation applicable to discharges to Crow Creek are developed and approved by the Tribes and/or EPA.

K. Miscellaneous

The effective date of the permit and the permit expiration date will be determined at the time of issuance. The permit will be issued for a period of approximately five years but not to exceed five years.

Prepared by Rosemary Rowe and David Rise
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